

**CUSTOMER NO.: 24498**  
**Serial No. 10/081,285**  
Reply to Office Action dated: 2/23/05  
Response dated: 03/09/05

**PATENT**  
**PF010019**

**REMARKS**

In this Final Office Action, the Examiner noted that claims 1-5 and 7-13 are pending in the application. The Examiner noted that claims 1-5 and 7-8 stand rejected and that claims 9-13 are withdrawn from consideration herein. By this response claim 1 is amended to more clearly define the invention of the Applicant and not in response to prior art.

In view of the amendments presented above and the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102. Thus the Applicant believes that all of these claims are now in allowable form.

**Restriction Requirement**

In response to the restriction requirement imposed by the Final Office Action, dated February 23, 2005 (Paper no. 7), the Applicant hereby elects invention I as defined by the Examiner. According to the Examiner, the elected claims 1-5 and 7-8 are drawn to a rotary drum, classified in class 360, subclass 271.1. More specifically, the elected claims are drawn to a laser welded rotary drum wherein screw joints between drum base and the lower drum are not needed, screws can be saved and thus, drilling of tapped holes as well as screw holes can be avoided. Another benefit of the Applicant's invention is that a machining regarding surface finish of the drum base and the lower drum for fitting them together (before assembling) is no more necessary and thus can be dispensed with. As such, costs of manufacturing drum units are greatly reduced.

To the extent that this restriction requirement is maintained by the Examiner, the Applicants reserve the right to subsequently file divisional applications in order to prosecute the inventions recited in any one or more of the non-elected groups of claims of invention II as defined by the Examiner (e.g., claims 9-13).

Furthermore, the Applicant respectfully traverses the Examiner's restriction requirement. As such, the Applicant respectfully requests reconsideration of the restriction requirement and requests that the restriction requirement be withdrawn for at least the following reasons:

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1. The Applicant's claims 1-5, 7-8, and 9-13 are all directed to a laser welded rotary drum wherein screw joints between a drum base and a lower drum are not needed, screws can be saved and thus, drilling of tapped holes as well as screw holes can be avoided as claimed in at least the Applicant's independent claim 1.

That is, the Applicant submits that the two inventions classified by the Examiner as invention I and invention II are both drawn to an inventive laser welded rotary drum and a method for manufacturing said rotary drum, and as claimed, the Applicant respectfully submit that claims 1-5, 7-8, and 9-13 are directed to a single invention.

2. The Applicant further respectfully submits that if the Examiner continues to find that claims 1-5 and 7-8, and 9-13 are drawn to two distinct inventions at least in accordance with MPEP § 806.05(f) (although the Applicant does not concede), the search and examination of the entire Application can still be made "without serious burden to the Examiner." (See MPEP § 803).

As such and because of the above traversal, the Applicant respectfully submits that the Right of Petition under 37 CFR 1.144 has been preserved.

### **Rejections**

#### **A. 35 U.S.C. § 102**

The Examiner rejected claims 1-5 and 7-8 under 35 U.S.C. § 102(b) as being anticipated by Sawada et al. (JP 5-166249, hereinafter "Sawada"). The rejection is respectfully traversed.

The Examiner alleges that regarding claims 11 and 17, Sawada teaches a rotary drum including all of the elements of the Applicant's claims. The Examiner alleges that as the Applicant's claims are directed to a rotary drum, *per se*, the method limitations appearing in the claims have only been accorded weight to the

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extent that they affect the structure of the completed rotary drum. The Applicant respectfully disagrees.

That is, "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)) (emphasis added).

The Applicant submits that the Sawada reference fails to teach, suggest or disclose each and every element of at least the invention as recited in the Applicant's independent claim 1, which specifically recites:

"Rotary drum for a tape recorder for recording and/or reproducing signals according to helical scan system, comprising:  
a rotary upper drum;  
a stationary lower drum for mounting said rotary upper drum; and  
a drum base for mounting said stationary lower drum to form an assembly having a tilt angle with regard to a tape deck chassis plane, wherein said drum base and said lower drum are welded together at an abutting area of the drum base and the lower drum **such that said drum base and said lower drum remain free of screw holes for affixing said drum base to said lower drum.**" (emphasis added).

The Applicant's invention is directed at least in part to a rotary drum for a tape recorder including at least a rotary upper drum, a stationary lower drum, and a drum base for mounting the stationary lower drum where the drum base and the lower drum are welded together such that the drum base and the lower drum remain free of screw holes for affixing the drum base to the lower drum. In support of at least claim 1, the Applicant in the Specification specifically recites:

"The present invention is based on the idea to join lower drum and drum base together by welding, particularly by means of laser welding. This solution simplifies assembly of lower drum and drum base, called lower drum assembly in the following.

As, according to the present invention, screw joints between drum base and the lower drum are not needed, screws can be saved and thus, drilling of tapped holes as well as screw holes can be avoided. Another benefit of this invention is that a machining regarding surface finish of the drum base and the lower drum for fitting them together (before assembling) is no more necessary and thus can be dispensed with.

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Furthermore, measures may be provided to facilitate assembly procedure of the lower drum assembly which, particularly, can be realized by simple mouldings within lower drum and/or drum base.

Hence, costs of manufacturing drum units are greatly reduced." (See Applicant's Specification, page 1, line 28 through page 2, line 14).

The Applicant, in the Specification, further recites:

"Fig. 1 is a schematic illustration of a drum base 2 to be used for lower drum assemblies according to a first (Fig. 2) and a second (Fig. 3a) embodiment of the present invention. In contrast to the lower drum assembly according to the prior art, the drum base 2 of the first and the second embodiment, respectively, does not need any screw joints of the drum base 2 with the lower drum 1 because they are joined together by welding, particularly by means of laser welding (Fig. 4)." (See Applicant's Specification, page 3 lines 23-31).

It is clear from at least the portions of the Applicant's disclosure presented above that the Applicant's invention, as taught in the Applicant's Specification and as claimed by at least the Applicant's claim 1, is directed at least in part to a rotary drum for a tape recorder including at least a rotary upper drum, a stationary lower drum, and a drum base for mounting the stationary lower drum where the drum base and lower drum do not require screws or screw holes for assembling the drum base and the lower drum because the drum base and the lower drum are welded together. A rotary drum in accordance with the Applicant's invention is advantageous over the prior art, and specifically over Sawada, at least because the Applicant's invention reduces costs of manufacturing and there is less of a chance for the drum base and the lower drum to become loose and lose their orientation with respect to each other.

The Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Sawada for a rotary drum for a tape recorder including at least a rotary upper drum, a stationary lower drum, and a drum base for mounting the stationary lower drum where the drum base and the lower drum are welded together "such that said drum base and said lower drum remain free of screw holes for affixing said drum base to said lower drum" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

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Sawada specifically teaches a rotary head drum device including a stationary drum which is fixed via a drum base to a chassis, a rotary drum which is freely rotatably supported via a revolving shaft on the stationary drum and projects a head on its outer peripheral surface on which the tape travels and an earth member which is erected in the corner part on the drum base so as to extend onto the rotary drum. In Sawada, a conductive brush is mounted via a holder to the front end of a mounting plate of the earth member, the conductive brush formed to freely contact the upper surface of the mounting plate to enable the discharge of static electricity generated in a tape at a low cost and to eliminate the noises and loss torque during rotation of a rotary drum. (See Sawada, Abstract).

However, there is absolutely no teaching, suggestion or disclosure in Sawada for a rotary drum for a tape recorder including at least a rotary upper drum, a stationary lower drum, and a drum base for mounting the stationary lower drum where the drum base and the lower drum are welded together "such that said drum base and said lower drum remain free of screw holes for affixing said drum base to said lower drum" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1. That is, Sawada fails to teach, suggest or anticipate a drum base and lower drum that are free of screw holes required by the prior art for affixing the drum base to the lower drum because the drum base and lower drum are inventively welded together.

In this Final Office Action, the Examiner noted that determination of patentability in 'product-by-process' claims is based on the product itself and thus the product in such claims is unpatentable if it is the same as or obvious from a product of the prior art. The Applicant respectfully submits that the product of at least the Applicant's claim 1 has an inventive advantage over Sawada. Specifically, and as recited above, there is absolutely no teaching, suggestion or disclosure in Sawada for a rotary drum for a tape recorder including at least a rotary upper drum, a stationary lower drum, and a drum base for mounting the stationary lower drum where the drum base and the lower drum are welded together "such that said drum base and said lower drum remain free of screw holes for affixing said drum base to said lower drum" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

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As such and for at least the reasons described above, the Applicant respectfully submits that Sawada fails to teach, suggest or disclose at least each and every element of the Applicant's claimed invention, arranged as in at least the Applicant's claim 1 as required for anticipation, and that therefore the teachings and disclosure of Sawada do not anticipate the Applicant's invention, at least with respect to independent claim 1.

Therefore, the Applicant submits that for at least the reasons recited above independent claim 1 is not anticipated by the teachings of Sawada and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 2-5 and 7-8 depend either directly or indirectly from independent claim 1 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 2-5 and 7-8 are also not anticipated by the teachings of Sawada. Therefore the Applicant submits that dependent claims 2-5 and 7-8 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

#### Applicant's Note

The Applicant respectfully submits that the Amendment made herein places the Application in better condition for allowance and does not require the Examiner to perform a new search. As such, the Applicant respectfully requests that the Examiner enter this after-final amendment and reconsider the present application for allowance.

#### Conclusion

Thus the Applicant submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

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If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,  
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